

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003P08616WO	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2004/050709	International filing date (day/month/year) 05.05.2004	Priority date (day/month/year) 13.06.2003	
International Patent Classification (IPC) or national classification and IPC			
Applicant SIEMENS AKTIENGESELLSCHAFT			

<ol style="list-style-type: none"> 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: <ol style="list-style-type: none"> a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of <u>5</u> sheets, as follows: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). 																								
<ol style="list-style-type: none"> 4. This report contains indications relating to the following items: <table border="0"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table> 	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
<input checked="" type="checkbox"/>	Box No. I	Basis of the report																						
<input type="checkbox"/>	Box No. II	Priority																						
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability																						
<input type="checkbox"/>	Box No. IV	Lack of unity of invention																						
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement																						
<input type="checkbox"/>	Box No. VI	Certain documents cited																						
<input type="checkbox"/>	Box No. VII	Certain defects in the international application																						
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application																						

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/050709

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:

international search (Rule 12.3 and 23.1(b))
 publication of the international application (Rule 12.4)
 international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished
 the description:

pages 1, 2, 4-14 as originally filed/furnished

pages* 3, 3A received by this Authority on 18.01.2005 with letter of 17.01.2005

pages* _____ received by this Authority on _____

the claims:

nos. _____ as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19 18.01.2005 with letter of 17.01.2005

nos.* 1-4 received by this Authority on of 17.01.2005

nos.* _____ received by this Authority on _____

the drawings:

sheets 1/5-5/5 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, nos. _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____
 the claims, nos. _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.	PCT/EP2004/050709
-------------------------------	-------------------

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
-----------	--

1. Statement

Novelty (N)	Claims	<u>1 - 4</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1 - 4</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1 - 4</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

This report makes reference to the following document:

D1: US-B1-6 345 076 (GERSTACKER WOLFGANG ET AL) 5
February 2002 (2002-02-05)

V.1 D1 is considered to be the prior art closest to the subject matter of claim 1. D1 discloses (the references in parentheses are to D1): a

method of estimating data units transmitted in a radio block via a radio channel (column 3, lines 25-29), in which method

- based on the transmitted data units, a signal sequence is received by a receiving station (column 3, line 66, "received symbols"),
- the components of the received signal sequence are assigned to at least a first and a second signal block in the temporal order in which they are received (column 3, lines 66-67, "at least two symbol blocks") and are processed block by block (column 4, line 3, "symbol block by symbol block"), wherein the signal blocks overlap in such a way that that

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/050709

- Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- at least one component of the received signal sequence belongs to both signal blocks (column 4, line 1, "symbol blocks overlapping by at least one symbol"),
- and estimated values for the transmitted data units are determined using the components of both signal blocks, the signal blocks overlapping in such a way that an estimated value is determined for at least one transmitted data unit using both signal blocks (column 4, lines 1-3, "forms symbol blocks overlapping by at least one symbol and forms the estimates for the transmitted symbols symbol block by symbol block").

Thus the subject matter of claim 1 differs from the known method in that, after the two estimated values have been determined, only the estimated value for the at least one transmitted data unit determined using one of the two signal blocks is used.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

- v.2 The problem to be solved by the present inventive can therefore be regarded as that of achieving better estimation for the first and the last transmitted data units (see the description, page 4, lines 13-23 and page 11, line 29 - page 12, line 6).

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/050709

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
V.3	The solution to this problem as proposed in claim 1 of the present application involves an inventive step for the following reasons (PCT Article 33(3)): none of the documents cited in the search report suggests improving the estimation of transmitted data units by using overlapping signal blocks, wherein, after two estimated values have been determined, only the estimated value for the at least one transmitted data unit determined using one of the two signal blocks is used
V.4	The same argument applies accordingly to independent claim 4. The subject matter of claim 4 is therefore also novel and involves an inventive step.
V.5	Claims 2 and 3 are dependent on claim 1 and therefore also meet the PCT requirements for novelty and inventive step.